**Relevant**

**If power is reduced with hypertonia & hyper-reflexia& exten**

**planter response on one side (hemiparesis)**

Rapidly proceed to upper limb

▼

Assess Rapidly -- tone, power, reflexes, and finger nose test (bilaterally)

▼

Move to cranial nerves (rapid assessment)

- Show your teeth ($7^{th}$ nerve)
- Close your eyes don't let me open ($7^{th}$ nerve)
- Extrao-cular movements ($3^{rd}$, $4^{th}$, $6^{th}$ nerves)
- Open mouth & say Aaaah ($9^{th}$ and $10^{th}$ nerves)
- Cough ($9^{th}$ ad $10^{th}$ nerves)
- Protrude tongue ($12^{th}$ nerve)

▼

**Sensation** to pin prick bilateraly in upper/lower limb & cortical sensation (two point discrimination, localization, sensory inattention in suspected cerebral strok patients)

▼

Move to

▼

Pulse (irregular- atrial fibrillation)

▼

Blood pressure (Hypertension)

▼

Auscultate Carotid arteries bilaterally for Bruit (carotid atherosclerosis)

▼

Xanthelasmas (dyslipidemia)

▼

Precordial auscultation (valvular lesion leading to emboli)

▼

Back of Chest for Aspiration pneumonia (stroke complication)

▼

Bed sores (stroke complication)

▼

Gait if power > 3

## 1.2: Scheme for spinal cord Compression

**If findings suggestive of spastic parapareses (upper motor neuron signs in both lower limbs then proceed to**

↓

Check pin prick sensation and position sense

↓

If impaired find out level

If at T4 --- Examine sensation in upper limb, if impaired try to find out level in upper limb and check motor system too

If level below T4

↓

- Finger nose test (cerebellar signs ~~multiple sclerosis~~ two space lesion)

Extra-ocular movement and Nystegmus (intraneuclear ophthalmoplegia --- multiple sclerosis)

↓

Back for **spinal deformity** (Gibbus formation in spinal Tuberculosis), **spinalTenderness** (metastatic disease) and Bed sores (complication of parapresis).

- ✧ **Chest auscultation** at apices for pulmonary tuberculosis
- ✧ **Lymph nodes** for Tuberculosis/lymphoma.
- ✧ Offer **fundoscopy** (Multiple sclerosis).
- ✧ **Gait** if power > 3

## 1.3: Scheme for spastic paraparesis with impaired position sense

**If Spastic paraparesis with intact pin prick & impaired position sense**

↓

Check for

- Past pointing
- Extra-ocular movements &Nystegmus

↓

Pescavus
High arch palate
Precordium (HOCM)
Kyphosis
Fundus
**Fredricks ataxia**

↓

Pale- b12 deficiency anemia
Glossitis
Precordium (Flow murmur due to anemia)
**Subacute**

↓

Argyll Robertson pupil
Precordium (AR)
**Tabesdorsalis**

↓

Fundus- optic neuritis
**Multiple sclerosis**

**a: th no sensory impairment**

If Lower limbs are with **Spastic parapresis** with **No Sensory impairment** then

↓

Move to upper limb

Rapid assessment for bilateral

- Bulk / Fasciculation
- Tone
- Power
- Reflexes

▼

Check **Past pointing** by finger nose test bilateraly

Examine **Cranial nerves**

(Rapid assessment ----

- Show your teeth (7th nerve)
- Close your eyes don't let me open (7th nerve)
- Extrao-cular movements (3rd, 4th, 6th nerves)
- Open mouth & say Aaaah (9th and 10th nerves)
- Cough (9th ad 10th nerves)
- Protrude tongue (12th nerve)

↓

Jaw Jerk (MND)

↓

Cortical Sensation (two point discrimination, localization, sensory inattention

↓

Fundus examination (MS)

↓

Gait if power > 3

D/D

- MND
- Parasagittalmeningioma
- Bilateral anterior Artery circulation stroke.
- Hereditary Spastic paraparesis
- Multiple sclerosis

## 1.5: Scheme for flaccid paraparesis

**If Flaccid Paraplegia/parapresis**

With or without sensory loss in gloves & stocking distribution

▼

Move to upper limb --- (Rapid assessment)

Motor (bulk, tone, power, reflexes)

and

Sensory system (pin prick sensation)

▼

Cranial nerves (rapid assessment

- Show your teeth (7th nerve)
- Close your eyes don't let me open (7th nerve)
- Extrao-cular movements (3rd, 4th, 6th nerves)
- Open mouth & say Aaaah (9th and 10th nerves)
- Cough (9th ad 10th nerves)
- Protrude tongue (12th nerve)

▼

Then do rapid screening for **cause**

- Pulse (resting tachycardia (GBS), arrhythmias (GBS))
- B.P (HTN, postural drop at end of examination- GBS)
- Thyroid enlargement by deglutination (periodic paralysis)
- Chest expansion with measuring tape (respiratory muscle involvement)
- Bed sores (complication of paraplegia)
- Blue line on gum (lead poisoning)
- Finger prick mark (Diabetes Mellitus).

**Differential diagnosis**

- GBS.
- CIDP
- Periodic paralysis
- Lead poisoning
- Botulism
- Diabetes mellitus

## 1.6: Scheme for proximal muscle weakness

**If you found just proximal muscle weakness with no other abnormality (intact reflexes, no sensory loss)**

↓

Move to upper limb.

Rapid assessment of power

Fatigability Test (myasthenia)

and

Muscle Tenderness (myositis)

↓

Move to cranial nerves.

- Sustained up ward gaze Test
- Extraocular movements
- Show teeth, smile
- Say aaaaah, protrude tongue, cough
- One breathe count
- Nasal speech
- Week Gag reflex.

↓

- Neck lift against resistance

↓

- Spine for kypho-scoliosis (dystrophies)

- Precordium for cardiomyopathy
- Pallor
- Thyroid enlargement
- Skin changes for dermatomyositis (gottron papule, heliotrope rash, shawl sign)
- Cushingnoid features – moon face, buffalo hump, pupurish straie, hypertension etc(itrogenic – therapeutic steroid use)

**Differential diagnosis:**

- Myasthenia gravis
- Myositis (poly myosistis, dermatomyositis)
- Muscular Dystrophies

## 1.7: Scheme for Examination of motor system of upper limb

**Command: Examine Motor System of upper limb & do Relevant (Mostly for cerebellar lesion)**

Introduction (ask name & assess speech- scanning speech)

Consent

Position – preferably sitting

Exposure (ideally ask patient to uncover his upper limbs to get an idea about power in upper limb).

- Inspect bilaterally for

**Hair loss** ( *may indicate neuropathy or ischemia)

↓

**Fasciculation** (Spontaneous and Induced, at four areas bilaterally

↓

**Bulk** (check with measuring tape and compare bilaterally if visible wasting)

After that check for

**Tone** and compare it bilaterally around wrist, elbow & shoulder joint with fixed proximal and distal joints

↓

**Power** bilaterally in all major muscles group ( check against resistance if power is more than 3)

▼

**Reflexes**- compare b/l in brachioradialis, biceps and triceps tendons

If **all intact** except for **hypotonia** then go for:

- Past pointing
- Intentional tremor
- Dysdiadochokinesia
- Rebound Phenomenon

Assess all cranial nerves rapidly

- Show your teeth (7th nerve)
- Close your eyes don't let me open (7th nerve)
- Extrao-cular movements (3rd, 4th, 6th nerves)
- Open mouth & say Aaaah (9th and 10th nerves)
- Cough (9th ad 10th nerves)
- Protrude tongue (12th nerve)

▼

Nystegmus and Saccadic eye movements

▼

Assess Scanning Speech

(Qus-Tun-Tunia)

▼

Assess Lower limb rapidly (tone, power, reflexes)

▼

Heel shin Test if power greater than 3

▼

Pendular knee jerk

▼

Gait if power greater then 3 to see:

- Broad based gait
- Tandem Gait

- Romberg sign

## 1.8: Scheme for ptosis

**Command: Examine face & proceed**

- Introduction
- Consent
- Position (sitting)
- Look at face & observe for
  - Ptosis
  - Strabismus ($3^{rd}$, $4^{th}$, $6^{th}$ nerve/ophthalmoplegia )
  - Flattened Naso-labial folds (b/l facial weekness)
  - Loss of lateral eyebrows (hypothyroid)
  - Mask like face.
- Look in oral cavity in detail (mucormycosis)
- Check Nasal & auricle orifices

**If Bilateral Ptosis**

▼

Check pupil (light reflex)

▼

If Normal

▼

Extra-ocular movements (Normal)

▼

Sustained upward gaze

▼

Neck lift against Resistance

▼

Power in upper limbs, distal and proximalmuscles & fatigability Test.

(Rest of the scheme as given in proximal muscle weakness)

**Differential Diagnosis**

- Myasthenia Gravis

- Muscular Dystrophies
- Myositis

## If Unilateral Ptosis

↓

Light reflex

↓

**Dilated pupil**

↓

Extra ocular movements (3, 4, 6 nerve - ophthalmoplegia)

Impaired

↓

5th Nerve examination (motor& sensory--- cavernous sinus thrombosis)

↓

II Nerve (cavernous sinus/ orbital apex syndrome)

- Visual acuity
- Field
- Fundus

Rest of cranial nerves rapidly

↓

Neck stiffness (post. Communicating artery aneurysm/SAH)

↓

BSL prick mark (diabetic)

Oral cavity/nasal cavity (mucormycosis/wegners)

Thyroid (periodic paralysis/hypo)

↓

Lower limb motor and Sensory examination rapidly along with assessment of planter response (mononeuritis multiplex)

**Differential diagnosis:**

- Cavernous sinus Thrombosis
- Orbital apex Syndrome

- Posterior communicating artery aneurysm
- Diabetes mellitus
- Weber syndrome
- Mononeuritis multiplex.

## nilateral ptosis with constricted pupil

↓

Enaphthalmos (Hornors syndrome)

↓

Extra-ocular movements and Nystegmus (PICA/MS)

↓

5th cranial Nerve examination Sensory& Motor

↓

9th& 10th cranial nerve examination by Gag reflex

↓

Rest of cranial nerve assessment rapidly

↓

Neck –

- Thyroid Scar (thyroidectomy)
- Palpate bilateral carotids one by one for aneurysm
- Lymph nodes cervical

↓

Auscultate lung apices (pancost tumor)

↓

Past pointing in upper limb (bilaterally)

↓

Lower limb – Rapid assessment of motor and Sensory system along with Planter response (PICA/syringomyelia/multiple sclerosis)

**Differential diagnosis:**

- PICA syndrome

- Syringomyelia
- Multiple sclerosis
- Carotid artery aneurysm/Dissection
- Pancoast tumor
- Trauma to neck
- Thyroidectomy

## 1.9: Scheme for Parkinson's disease

**Parkinson's disease:**

- Mask like expressionless face, less blinking, staring look
- Tibutations of head
- Glabellar tap – Myerson sign
- Blephroclonus
- Drooling of saliva
- Speech – slow, tremulous, monotonous, repetition of end word
- Tremors- resting, pin rolling
- Give command to fasten/open button, count on finger to check bradykinesia
- Rigidity- increased by voluntary movement on other limb
- Cheek writing – micrographia
- Assess gait –
  - Short step
  - Stooped posture
  - Difficult to initiate, stop and turn
  - Less arm swing

Relevant:

- Olfaction
- Minimental status (Lewy body dementia)
- Cerebellar signs (Shy Dragor syndrome)
- Vertical gaze abn

- Postural drop (ShyDragor syndrome)
- Side effects of dopamine (abnormal movements)

## 1.10: Scheme for speech examination

**Speech examination**

Can either be?

- Dysphasia
- Dysarthria

For dysphasia:

1. Fluency
2. Comprehension
3. Naming
4. Repetition
5. Reading
6. Writing
7. Calculation

Relevant:

- Facial weakness
- Hemiplegia
- Homonymous hemianopia

Followed by examination of:

- Blood pressure
- Pulse
- Carotid and precordial auscultation
- Xanthelasmas
- Bed sores
- Gait

**Note: for dysartheria follow cerebellar lesion scheme**

# hort Case Examination in Abdominal Syste

**Scheme for abdominal examination**

**mand: Examine Abdomen & Do relevant**

- Introduction & consent
- Position (Supine, hands by side).
- Proper exposure
- From foot end, take a keen look from head to toe and try to get as m information as possible like; generalized wasting, Branula posit Foley's, Pigmentation, dialysis fistula etc..
- Now from right side bend till at patient level & observe for any perista or pulsation.
- Take a look at opposite flank for fullness.
- Ask Patient to cough and check for hernial orifices (Umbilical inguinal) take consent before checking inguinal.
- If visible prominent veins - check flow.
- Look for Striae, (color, orientation) any scar mark especially paracenteses and Dressing,

**Palpation:**

- Ask for any pain in abdomen.
- Keep looking towards patient face.
- Perform superficial palpation.
- Bend yourself a bit and keep arm straight at level of your palm dur whole palpation.
- Perform Deep palpation.
- Perform visceral palpation.
- For hepatomegaly- check for span, surface, tenderness, pulsati consistency, and border
- For splenomegaly- check for span, surface, tenderness, pulsati consistency, and border

Note:

Perc

Ausc

Rele

- Bimanual palpation for Kidneys bilaterally
- Bladder palpation
- Palpation of Para aortic Lymph nodes
- Inguinal Lymph nodes (after taking consent).

**Note:**

- **Confirm presence of liver & Spleen with percussion too.**
- **Percuss upper border of liver & measure span, even if you are not able to palpate lower border.**
- **If you are unable to palpate spleen, then you can check it again with palpation while turning patient towards you during testing for Shifting Dullness ( keeps you from turning patient again and again)**

**Percussion:**

- Check for Shifting Dullness.
- Confirm Spleen with percussion if not felt before while you turn patient towards you.
- Check for Fluid Thrill.

**Auscultation:**

- Listen for Gut sounds.
- Hepatic & splenic bruit if they are enlarged.
- Renal bruit
- Cover abdomen and proceed to relevant examination.

**Relevant examination:**

- Check for Flapping Tremors on outstretched hands.
- Check clubbing by coming to level with help of card.
- Look for Leukonychia, and other nail changes.
- Look for pallor &Jaundice.
- BSL prick mark
- Palmar erythema
- Dupuytren contracture (alcoholic cirrhosis)

- Bruises, petechias at forearm
- Tattoo marks or IV marks (abuse)
- Excoriation marks (cholestatic/obstructive jaundice).
- Eyes - confirm Jaundice, pallor
- Parotid enlargement (alcoholic cirrhosis)
- Oral Cavity—Jaundice, Lichen Planus (HCV), Petechia/ Bleed.
- Neck-- spider Navi (On upper chest too)
- Juglur vein- Hepato-jugular reflux (right heart failure )
- Gynecomastia
- Pedal edema bilaterally (Check against bone & while looking at patient face).
- Now ask the patient to Sit facing away from you.
- Check for Spidernavi on back.
- Check cervical lymph nodes
- Sacral edema
- check for Axillary lymph nodes
- Say thanks & Cover.

## 2.2: Differential diagnosis for abdominal findings

**Differential Diagnosis for most commonly encountered exam findings:**

**Note: Tell most common & most likely diagnosis first and don't use abbreviation.**

**Ascites with Splenomegaly and Jaundice:**

**Differential Diagnosis:**

- DecompensatedCirrhosis with portal hypertension.
- Acute on Chromic liver Disease.
- Hepatoma.
- Disseminated Tuberculosis
- Metastatic
- Lymphoma with peritoneal metastasis.
- Systemic lupus Erythromatosis.

**Ascites with Splenomegaly:**

**Differential diagnosis:**

- Decompensated chronic liver disease
- Lymphoma
- Systemic lupus Erythromatosis
- Disseminated tuberculosis
- Portal vein thrombosis

**Ascites:**

**Differential diagnosis:**

- Tuberculosis
- Peritoneal carcinomatosis.
- Lymphoma.
- Budd Chiari syndrome
- Rheumatoid Arthritis/Systemic lupus Erythromatosis.
- Meigs syndrome.
- Myxedema.

**Tender hepatomegaly with Ascites:**

**Differential diagnosis along with relevant you need to look for:**

- Hepatoma / metastatic (irregular Surface. any lymph. node)
- Alcoholic cirrhosis. (Parotid enlargement, Dup. contracture)
- Acute on Chronic liver Disease (deep Jaundice)
- CCF, constrictive pericarditis (Auscultate heart. JVP)
- Lymphoma ( Lymph Nodes)

**Ascites with pedal edema:**

**Differential diagnosis:**

- Decompensated Chronic Liver Disease (Stigmata of CLD)
- Congestive Cardiac Failure with hepatic congestion. (JVP and Precordium)
- Nephrotic Syndrome (Periorbital puffiness).
- Malabsorption (Petechia, bruises, Proximal muscle weakness, anemia)

**Differential diagnosis of Tender Hepatomegaly:**

**Young**

- Acute viral hepatitis.
- Liver abscess.
- Alcoholic hepatitis.
- CCF/Constrictive pericarditis.
- Budd Chiari Syndrome

**Old**

- Hepatoma/metastatic.
- And all as in young.

**Differential diagnosis of Non Tender Hepatomegaly:**

**Small Size**

- Enteric Fever
- Malaria ( Chronic)
- Chronic Myeloid Leukemia.
- Lympho-proliferative Disorder.

- Sarcoidosis.

**Huge**

- Hepatoma
- Metastatic
- Hydatid Cyst.
- Polycystic Liver.

**Non Tender Hepatomegaly with Jaundice:**

**Differential diagnosis:**

- Wilsons: Disease
- Primary biliary cirrhosis
- Autoimmune
- Hemochromatosis
- Lymphoma.

**Hepato-Splenomegaly with Lymphadenopathy**

**Differential diagnosis:**

- Lympho-proliferative. Disorder.
- Leukemia (ALL / CLL according to age).
- Tuberculosis.
- Systemic lupus erythematosus
- Sarcoidosis
- Infection – Brucellosis
- Infectious Mononucleosis
- HIV
- Cytomegala virus infection

**Splenomegaly with Anemia & Jaundice:**

**Differential diagnosis:**

- Hemolytic anemia.
- Chronic Malaria.
- Pernicious Anemia (Glossitis, impaired Position sense)

- Turn Patient toleft side.
- Listen with bell, hold breath at end of expiration, and concentrate fully.
- Ask patient to take breath.
- Check axillary radiation if Systolic murmur is heard at apical area.
- Auscultate at Tricuspid area while asking patient to hold breath at end Inspiration.
- Ask patient to lean forward.
- Auscultate $A_1$ & $A_2$ with breath held at end of expiration.
- Check carotid radiation in case of Systolic murmur at A1.

**Note:** You should Skip aortic auscultation in lying position to save Time.

- Auscultate lung basis from back while patient is sitting
- Check for sacral edema
- Now lie patient at 45°
- Check Temperature by putting Thermometer in axilla
- Check Pulse and assess:
  - Rate (Rate can be skipped in atrial Fibrillation)
  - Rhythm
  - Volume
  - Character (Collapsing pulse if suspecting aortic regurgitation after ruling out pain in Shoulder and elbow joints)
  - Radio-radial / radio-femoral delay.
- Check Blood pressure (Make habit to check by palpation 1st) and note Pulse pressure.
- Now ask patient to stretch hands in front of you.

**And look for:**

- Clubbing by bending at patients hands level and confirm with card
- Splinter hemorrhages
- Osler nodes
- Jane way lesions
- Anemia

**In Forearm look for:**

- Petechia
- IV abuse mark
- **Face**: Jaundice anemia
- **Neck** – Jugular venous pressure and Hepato-juglur reflux
- Pedal edema
- Planters (To rule out cerebrovascular event due to thrombo-embolism
- Abdomen-palpate liver and spleen
- Offer funduscopic eye examination

**Note:** Look for signs of Rheumatological Disorders in case of aortic regurgitation and mitral regurgitation.

**Note:** In atrial fibrillation, you should count pulse rate for whole one minute while checking for pulses deficit with examiner's help at same Time. In exam you can't spare one minute on rate count. So you can explain examiner at end if he ask.

### 3.2: Explanation of Mitral regurgitation

Young ill looking boy lying on bed in respiratory distress with branula on Right hand. There is no central or peripheral cyanosis. On examination of precordium. There are visible pulsation in left infra-mammary region. However there is no scar mark. Apex beat in palpable in left 6$^{th}$ intercostal space lateral to mid clavicular line, thrusting in character. Pulmonary component of 2$^{nd}$ heart sound is palpable. There is no left parasternal heave or Thrill. On Auscultation1$^{st}$ heart sound is soft, pulmonary component of Second heart sound is loud. There is high-pitched, blowing pan-systolic murmur of grade 3, at apical area, with axillary radiation. Best heard at end of expiration in left lateral position.

On extending my examination pulse in 100 beats/min, regular, good volume & normal Character. Blood pressure is 100/60 mm Hg with 40 pulse pressure. Lung fields are clear to auscultation. Venous pressure is not elevated and there is no pitting ankle or sacral edema.Patient is pale however there are no peripheral stigmata's of infective endocarditis or any evidence of Rheumatological Diseases. Planter response is Downward Bilaterally.

My clinical impression is mitral regurgitation with pulmonary Hypertension. Patient is in sinus rhythm with no evidence of heart failure.

**3.3: Explanation of Mitral stenosis:**

Young man lying on bed with no respiratory distress with branula on Right hand. There is no central or peripheral cyanosis. On examination of precordium. There are no visible pulsation or scar marks. Apex beat in palpable in left 5th intercostal space slightly lateral to mid clavicular line, tapping in character. Pulmonary component of 2nd heart sound palpable. There is left parasternal heave, however no Thrill. On Auscultation 1st heart sound is loud, pulmonary component of Second heart sound is also loud.There is low pitched, rumbling mid-diastolic murmur of grade 3, at apical area, with no radiation. Best heard at end of expiration in left lateral position with bell of stethoscope. There is also high-pitched, blowing pan-systolic murmur of grade 3, at tricuspid area. Best heard at end of inspiration.

On extending my examination pulse in 100 beats/min, regular, low volume normal Character. Blood pressure is 100/80 mm Hg with 20 pulse pressure. Lung fields are clear to auscultation. Venous pressure is not elevated and there is no pitting ankle or sacral edema. Patient is pale however there are no peripheral stigmata's of infective endocarditis Planter response is Downward Bilaterally.

My clinical impression is mitral stenosis with pulmonary Hypertension and tricuspid regurgitation. Patient is in sinus rhythm with no evidence of heart failure.

**3.4: Explanation of Aortic stenosis:**

Old man laying on bed with no respiratory distress with branula on right hand. There is no evidence of central or peripheral cyanosis. On examination of precordium. There are visible pulsations in left infra-mammary region, however there is no scar mark. Apex beat in palpable in left 5th intercostal space slightly lateral to mid clavicular line, normal in character. There is palpable systolic thrill at aortic area. Pulmonary component of 2nd heart sound is also palpable along with left parasternal heave. On Auscultation 1st heart sound is normal, pulmonary component of Second heart sound is loud. There is harsh ejection systolic murmur of grade IV at aortic area, with radiation to carotid, best heard at end of expiration in leaning forwards position. There is also a high-pitched, blowing pan-systolic murmur of grade 3, at tricuspid area. Best heard at end of inspiration.

On extending my examination pulse in 100 beats/min, regular, low volume & normal Character. Blood pressure is 100/80 mm Hg with 20 pulse pressure. Lung fields are clear to auscultation. Venous pressure is not elevated and there is no pitting ankle or sacral edema. Patient is pale however there are no peripheral stigmata's of infective endocarditis. Planter response is Downward Bilaterally.

My clinical impression is aortic stenosis with pulmonary Hypertension and tricuspid regurgitation. Patient is in sinus rhythm with no evidence of heart failure.

**3.5: Explanation of Aortic regurgitation:**

Middle aged ill looking man lying on bed in respiratory distress with branula on right hand. There is no evidence

precordium. There are visible pulsation in left infra-mammary region. However there is no scar mark.Apex beat in palpable in left 5th intercostal space lateral to mid clavicular line, heaving in character. No other sounds are palpable and there is no left parasternal heave or Thrill. On auscultation 1st and second heart sounds are normal.There is high pitched early diastolic murmur of grade III at left parasternal area, best heard at end of expiration in learning forward position.

On extending my examination pulse in 100beats/min, regular, good volume & collapsing in Character. Blood pressure is 100/40 mm Hg with 60 pulse pressure. There are prominent pulsation in neck, nail bed capillaries & in uvula and pistol shot femoral. Lung fields are clear to auscultation. Venous pressure is not elevated and there is no pitting ankle or sacral edema.Patient is pale however there are no peripheral stigmata's of infective endocarditis or any evidence of Rheumatological Diseases.Planter response is Downward Bilaterally.

My clinical impression is aortic regurgitation. Patient is in sinus rhythm with no evidence of heart failure or pulmonary hypertension.

**3.6: Explanation of Mitral regurgitation with infective endocarditis:**

Young ill looking girl lying on bed in respiratory distress with branula on Right hand. There is no central or peripheral cyanosis.On examination of precordium due to limited exposure I cannot comment on visible precordial pulsation or scar mark. However, apex beat in palpable in left 6th intercostal space lateral to mid clavicular line, thrusting in character. Pulmonary component of 2nd heart sound is palpable. There is left parasternal heave and systolic thrill in tricuspid area. On Auscultation 1st heart sound is soft, pulmonary component of Second heart sound is loud.There is high-pitched, blowing pan-systolic murmur of grade 3, at apical area, with axillary radiation. Best heard at end of expiration in left lateral position. There is also a high-pitched, blowing pan-systolic murmur of grade 3, at tricuspid area. Best heard at end of inspiration.

On extending my examination pulse was irregular, good volume & normal Character. Blood pressure is 100/50 mm Hg with 50 pulse pressure, temperature was 101 F.There are fine crepitation at lung basis bilaterally. Venous pressure is elevated 4 cm above the right sternal angle. And there is pitting ankle edema with no sacral edema. Patient is pale and clubbed. Splinter hemorrhages seen on nails. Splenic tip was palpable. However there is no clinical evidence of Rheumatological Diseases.Planter response is Downward Bilaterally.

My clinical impression is patient is suffering from infective endocarditis with mitral and tricuspid regurgitation with signs of pulmonary Hypertension, heart failure and probably atrial fibrillation.

### 3.7: Explanation of Ventricular septal defect:

Young boy lying on bed in respiratory distress with branula on Right hand. There is central or peripheral cyanosis.On examination of precordium. There are visible pulsati in left infra-mammary region. However there is no scar mark. Apex beat in palpable left 5th intercostal space in the mid clavicular line, normal in character. Pulmona component of 2nd heart sound is palpable. There is left parasternal heave and systo Thrill.On Auscultation 1st heart sound is normal, pulmonary component of Second he sound is loud.There is high-pitched, blowing pan-systolic murmur of grade 4, at l parasternal area, with no radiation and no effect of respiration.

On extending my examination pulse in 100beats/min, regular, good volume normal Character. Blood pressure is 100/60 mm Hg with 40 pulse pressure.Lung fiel are clear to auscultation. Venous pressure is not elevated and there is no pitting ankle sacral edema.Patient is pale however there are no peripheral stigmata's of infecti endocarditis.Planter response is Downward Bilaterally.

My clinical impression is ventricular septal defect with left to right shunt wi pulmonary Hypertension. Patient is in sinus rhythm with no evidence of heart failure.

Chapter – 4

# Short Case Examination in Respiratory System

## 4.1: Scheme for Examination of back of the chest and do relevant

**Command: Examine back of the chest & Do Relevant**

- Introduction and Consent
- → Position (hands crossed on opposite shoulder)
- → Exposure. (Ask for proper exposure even in female patient)
- Calculate respiratory rate at same time observe chest shape & movement. Look at both axillary areas too. (Any Scar, bulge, barrel shape?)
- Use of accessory muscle, pursed lips, Intercostal indrawing.
- Ask for tenderness & palpate Chest, while looking at patient Face.
- Check Chest movements at apical area & at back of the Chest.
- Measure Chest expansion with measuring tape.
- Check for Tactile Fremitus and compare bilaterally.
- Start Percussing apical area & move down the back of Chest performing Percussion in intercostal spaces& comparing bilaterally.

Note: (Inform patient I will hit my finger with my other finger, it wouldn't cause you pain).

- Move to axillary areas & compare bilaterally.
- Similarly Start auscultation from apical area, and move down on back & axillary areas, comparing bilaterally.

Note:

- (Listen for whole Inspiration & expiration).
- (If crepitation found, ask Patient to cough & Check for change in Character).
- Check vocal Resonance & compare It Bilaterally.

Relevant

- Ask the patient to Lie Down.

- Palpate Trachea after informing patient. & Check Tracheal Tug and cricoid distance.
- Palpate apex beat. (if suspecting collapse or pleural effusion).
- Ask the patient to stretch hands for Flapping tremors.
- Check clubbing.
- Look for palmar erythema.
- Check Tenderness at wrist & sensory loss at $C_8$ $T_1$ if you found clubbing suspecting apical lung tumor.
- Check for bounding pulses.
- Look at eyes for Jaundice, Pallor. (Horner's Syndrome if suspecting apical mass).
- Check Jugular venous pressure (JVP)
- If JVP raised than check for hepatomegaly & ascites.
- Pedal edema.
- Auscultate pulmonary area for loud $P_2$.
- Check forced expiratory Time if Suspecting COPD (Keep it to end).
- Ask patient to sit & Check lymph nodes (cervical &axillary).
- Check Bony Tenderness at sternum or vertebral bodies where you want.
- Look for Rheumataogical signs in case of plural effusion.

**Note:** Examination of Respiratory system is lengthy, don't worry if you skip steps relevant system as far as you have made correct interpretation of your findings Clinical evidence.

**Note:** It's not necessary to examine front of the Chest too if you are given command back of chest. Findings must be on back. Save your Time.

### 4.2 Explanations of Pleural effusion

Middle age lady of normal built, having branula on right hand, sitting on bed with respiratory distress having Respiratory rate of 24 breaths / min. However there is no evidence of central or peripheral cyanosis.On examination of the back of Chest there is a prominent bulge on the Right infra scapular region. However there is no scar mark. Chest movements are reduced in the Right infra scapular region & chest expansion is less than 3cm. Percussion note is stony dull in the Right infra scapular region. Breath sounds are absent in the same area along with a bronchial breathing just above the area. Tactile fremitus & vocal resonance are reduced in the same area.

On extending my examination trachea is central in position with no tracheal tug & normal crico-sternal distance. Apex beat is not displaced. Finger are not clubbed, patient is not pale neither jaundiced. Venous pressure is not elevated. There is no pitting ankle edema. There are no palpable accessory lymph nodes & there are no stigmata of Rheumatological Diseases.

My Diagnosis based on these clinical findings is Right sided pleural effusion.

**4.3: Explanations of Bronchiectasis**

Middle age lady with normal built sitting on bed with Respiratory distress having respiratory rate of 24 breaths/min. On Examination of back of chest is normal in shape with no scar mark. Chest movements are reduced bilaterally & equally. Chest expansion is less than 3cm. Percussion note is resonant throughout the both lung fields. Breath sounds are vesicular with prolonged expiration & there is expiratory wheeze throughout the Chest. There are coarse inspiratory crepitation at both lung basis which are changing character with cough. Tactile fremitus & vocal resonance are comparable bilaterally.

On extending my examination trachea is central in position with no tracheal tug & normal crico-sternal distance. Apex beat in not displaced (may be on Right side if Dextrocardia). Fingers are clubbed, with no evidence of central or peripheral cyanosis. Pulmonary component of second heart sound is loud, however venous pressure is not elevated and there is no pitting ankle edema. There is no palpable accessory lymphadenopathy.

My clinical Diagnosis based on these findings is Bronchiectasis with pulmonary hypertension.

**4.4: Explanations of chronic obstructive airway disease**

Old age man of normal built, sitting on bed in Respiratory distress with respiratory rate of 24 breaths/min. Patient is having pursed lips and using accessory muscles of Respiration with obvious Supra clavicular and intercostals recessions.

On examination of back of chest, chest is barrel in shaped, however there is no scar mark Chest movements are bilaterally reduced but equal. Chest expansion is less than 3cm.Percussion note is Resonant throughout the both lung fields. Breath sounds are vesicular but of diminished intensity, with prolonged expiration and expiratory wheeze throughout the both lung fields. Tactile fremitus and vocal Resonance are bilaterally comparable.

On extending my examination trachea is central in position with tracheal Tug & reduced crico-sternal distance & prolonged forced expiratory time. Apex beat was difficult to localize. Fingers are not clubbed & there is no evidence of peripheral or central cyanosis. There are no flapping tremors, palmarerythema or bounding pulses. Venous pressure is not elevated & there is no pitting ankle or sacral edema & pulmonary component of 2$^{nd}$ heat sound is loud.

My Clinical Diagnosis based on these findings is Chronic Obstructive Pulmon Disease with predominant Bronchitis and with evidence of pulmonary hypertension)

### 4.5: Explanations of Interstitial lung disease:

Middle age lady of normal built sitting on bed with Respiratory distress havi respiratory rate of 24 breaths/min. Patient is cyanosed centrally &peripherally.

On examination of back of chest, normal in shape with no scar mark. Ch movements are bilaterally reduced but equal. Chest expansion is less than 3cm.Percuss note is resonant throughout the lung fields. On Auscultation. There are fine cr inspiratory crackles which are not changing character with cough. Vocal Resonance tactilefremitus are normal bilaterally and comparable.

On extending my examination tracheas is central in position with no tracheal & normal crico-sternal distance. Fingers are clubbed; venous pressure is elevated & the is pitting ankle edema. Pulmonary component of 2nd heart sound is loud. However the are no stigmata of Rheumatogical diseases. Patientis having thin papery skin, Bruises o forearm, moon like face & increase supra clavicular fat pads and purpuric strias o abdominal skin.

My Clinical Diagnosis is interstitial lung disease with pulmonary hypertensio and patient must be on steroid as evidence by cushinoid appearance.

### 4.6: Scheme for Examination of front of the chest

**FRONT OF CHEST**

**(Mostly apical lung collapse or mass)**

- Introduction
- Consent
- Position (supine and arms by side and flexed at elbows to ease examination of axilla.
- Exposure (shirt off)
- Head to toe -- Deep observational look.
- Calculate Respiratory rate & Observe Chest shape, movement & scar mark.
- Ask for pain on front of chest.
- Palpate for tenderness.
- Check chest movements at apices & below nipples.
- Skip chest expansion till end when you sit your patient.

- Tracheal position, Tug, crico-sternal distance.
- Apex beat localization.
- Tactile Fremitus – at apices, rest of lung field and at axillae bilaterally.
- Percussion – apices, clavicle, rest of lung field and axillae bilaterally.
- Auscultation on same areas
- Vocal Resonance on same areas
- Ask patient to sit & measure Chest expansion with measuring Tape.

**Relevant**

Ask the patient to Lie Down.

- Palpate apex beat. (do it when patient was lying )

Ask the patient to stretch hands for

- Flapping tremors.
- Check clubbing.
- Look for palmar erythema.
- Check Tenderness at wrist & sensory loss at C8 T1 if you found clubbing & suspecting apical tumor.
- Check for bounding pulses.
- Look at eyes for Jaundice, Pallor (Horner's Syndrome if suspecting apical mass).
- Check Jugular venous pressure (JVP)
- If JVP raised than check for hepatomegaly & ascites.
- Pedal edema.
- Auscultate pulmonary area for loud P2.
- Check forced expiratory Time if Suspecting COPD. (Keep it to end).
- Ask patient to sit & Check lymph nodes (cervical & axillary).
- Check Bony Tenderness at sternum or vertebral bodies where you want.

**4.7: Explanation of lung mass/ collapse**

Old age emaciated man sitting on bed with branula on Right forearm, in Respiratory distress with R/R of 24 breaths/min. There is no evidence of central or peripheral cyanosis.

On examination of front of the Chest, Chest is slightly depressed at right Supra-memory region. However there is no scar mark. Trachea is deviated Towards Right side.

However apex beat is not displaced. Chest movements are reduced on right memory region& chest expansion is less than 3cm.Percussion note is dull in the area. Breath sounds are diminished along with reduced tactilefremitus & vocal Reso in same area. (Collapse with obstructed bronchus or mass lesion).

OR

There is bronchial breathing along with increased tactile fremitus and Resonance. (Collapse with patent bronchus)

Fingers are clubbed with signs of hypertrophic osteo-arthropathy. The wasting of small muscles of Right hand along with reduced sensation in dermatomes. There is no evidence of Hornors syndrome. There is pal supraclavicular & cervical lymphadenopathy, largest measuring 2x1 cm, fir consistency, non-tender, mobile & not tethered to skin or underlying structures. The no overlying draining sinus. Venous pressure is not elevated there is no pitting edema.

My clinical Diagnosis is Right Pancoast syndrome due to Right apical carcinoma of l

# Miscellaneous

## : Scheme for General physical examination

mmand: perform General physical examination and do relevant

- Introduction
- Consent and assess speech by asking name
- Exposure (shirt off if male )
- Position
- Take a look from foot end and Try to get hints as much as possible
- Temperature
- Pulse — rate, rhythm, volume, character, radio-radial delay, radio-femoral delay.
- Measure blood pressure if you think it's relevant otherwise you can do it at end if time allow.
- Respiratory rate.

➢ Ask to stretch hands in front of you.

- Flapping Tremors
- Fine Tremors
- Clubbing at level.

➢ Any other nail or skin changes on hand Dorsum.

- Leakonychia
- Koilonychia
- Splinter beamorrhoges
- Beu's lines
- Periungual Telengiectesia
- Skin Texture
- Muscle wasting

- Palmer surface
  - Erythema
  - Pallor
  - Dup. contracture
  - Pigmented creases
  - Swollen/Deformed Joints
  - Osler/Heber den/Bouchered nodules.
- Forearm:
  - IV lines
  - Bruises / Petechia
  - Tattoos
  - Rheumatoid nodules/epitrochlear/lymph nodes.
- Head —
  - Alopacia
- Eyes —
  - Xanthelasmas
  - Corneal arcus
  - Pallor
  - Jaundice
- Face —
  - malar rash
  - Beak nose
  - Parotid enlargement
- Oral cavity:
  - Gum Hyperplasia
  - Aphthous ulcers
  - Lichen planus
  - Petechia/Bleeding spots
  - Congested Throat

- Glossitis

➢ Neck —

- Jugular venous pressure (Hepato-jugular Reflex)
- Thyroid
- L.nodes (cervical and axillary)

➢ Chest —

- Spider Navi
- Sternal Tenderness
- Gynecomastia

➢ Inguinal lymph nodes

➢ Pedal edema

**Relevant:**

- Abdomen (If palpable lymph nodes)
  a. Liver
  b. Spleen
  c. Ascites
- Precordium examination (in anemia)

Chest Auscultation: To rule out pulmonary tuberculosis (if there is palpable Lymph nodes)

Position Sense: if Anemia

## 5.2: Examination scheme for hands and do relevant

**Command: Examine Hands & Do Relevant**

- Introduction
- Consent
- Position
- Exposure (till elbows)
- Observational look from foot end from head to Toe.

**Inspection:**

- Dorsum of hands:
  - Skin Texture/Rash
  - Swollen Joint/Deformities
  - Muscle wasting
- Nails:
  - Clubbing
  - Pitting
  - Nail fold infarct
  - Splinter hemorrhages
  - Telangiectasia.
- Palm:
  - Pallor
  - Erythema
  - Crease Pigmentation
  - Osler/Haberden nodules
  - Swollen / Deformed Joints.
  - Digital ulcers.
  - Fasciculation
  - Wrist/elbow Deformity
  - Ulnar Deviation
  - Psoriatic Plaques At elbow.

**Palpation after asking about pain in hands**

- Skin Temperature — compare with normal
- Joint :
  - Tenderness
  - Swelling
  - Nodules
- Thenar /hypothenar wasting

- Dup.Contracture
- Passive & Active movements around all joints & assess power.
- Pin-prick Sensation along Ulnar/Median/Radial nerve
- Phalen Test
- Tinel Test
- Rheumatoid nodules
- Epitrochlear lymph nodes.

**Functional:**

- Check hand grip.
- Button or unbutton Shirt
- Write On paper

**Relevant:**

- Other Joints if Joint is involved.
- Face (, cushingnoid, beak nose, malar rash….)
- Eyes (anemia, jaundice, xanthelasmas)
- Precordium (endocarditis, rheumatic, AR….)
- Chest (lung fibrosis/ tuberculosis/sarcoid….)
- Abdomen (hepatosplenomegaly…)
- Lymph nodes

(Do Relevant according to you findings).

## 5.3: Examination scheme in Diabetes Mellitus

- Cachectic / Obese
- Skin Pigmentation
- Hands
  - Onychomycosis.
  - Dup Contracture
  - Pallor

- Pulse with Radio-radial / radio- Femoral Delay & Peripheral Pulses.
- Blood pressure with postural Drop.
- Acanthosis nigricans
- Eyes:
  - Xanthelasmas/peri-orbital puffiness
  - Ocular palsy
  - Corneal arcus
  - Cataract
  - Fundus
- Oral
  - Thrush
  - Poor Dental Hygiene.
- Neck
  - Carotids
- Skin
  - Insulin injection marks
  - Lipo-dystrophy
  - Vitilogo, hair loss
- Proximal myopathy.
- Joint Deformity (Charcot joint)
- Peripheral Sensation
  - Pin prick
  - Vibration
  - Position
- Foot
  - Ulcer
  - Gangrene
  - Calluses.

**Relevant**

- Planter response bilaterally
- Precordium – third heart sound
- Cushinoid features

Ask for BSL Chart, Urine for protein & Ketones.

## 5.4: Examination scheme in Cushing disease

- General Look

Hands

- Clubbing
- Fungal infection
- Palmer erythema
- Deformed/Swollen joints (RA)

Arm

- Bruises
- Thin atrophic skin
- Proximal myopathy
- Blood pressure

Neck and Axillae

- Acanthosis nigricans
- Supra clavicular/ Inter-scapular fat pads.
- Telangiectasia

Face

- Moon face
- Cataract /Hemianopia (Pituitary tumor)
- Acne
- Hirsutism
- Oral Thrush

- Precordium

Chest

- Lung Carcinoma
- Chronic obstructive pulmonary disease
- Interstitial lung disease

Abdomen.

- Purpuric striae
- Obesity
- Scar
- Mass
- Lipodystrophy (Insulin)

Genitalia -Virilisation

Back

- Vertebral Tenderness
- Kyphosis

## 5.5: Examination scheme in acromegaly

**Face:**

- Large course facies
- Prominent Forehead wrinkling
- Prominent supra orbital ridge
- Baggy eyelids
- Large protruding lower jaw ( prognathinism)
- Large lips, nose, ears
- Maloccluded widely apart teeth
- Large tongue
- Enlarged skull bones

**Neck :**

- goiter
- acanthosis nigricans

**Hands :**

- large warm, sweaty,
- doughy feelings,
- spade like fingers,
- thick dorsal skin,
- Carpal tunnel syndrome signs
- Clubbing
- Needle prick marks for DM

**Eyes:**

- Bitemporal hemianopia
- Papilledema,
- Optic atrophy

**Skin :**

- Thick sweaty greasy pigmented

**Feet :**

- Enlarged

**Voice:**

- Husky

**Spine :**

- Kyphosis

**Joints:**

- Arthritis

**Chest :**

- Gynecomastia,
- Galactorrhea

**Precordium :**

- Cardiomyopathy,

**Muscles:**

- Proximal myopathy

**Hands :**

- large warm, sweaty,
- doughy feelings,
- spade like fingers,
- thick dorsal skin,
- Carpal tunnel syndrome signs
- Clubbing
- Needle prick marks for DM

**Eyes:**

- Bitemporal hemianopia
- Papilledema,
- Optic atrophy

**Skin :**

- Thick sweaty greasy pigmented

**Feet :**

- Enlarged

**Voice:**

- Husky

**Spine :**

- Kyphosis

**Joints:**

- Arthritis

**Chest :**

- Gynecomastia,
- Galactorrhea

**Precordium :**

- Cardiomyopathy,

**Muscles:**

- Proximal myopathy

## 5.6: Examine thyroid and do relevant

**Hyperthyroid**

Thyroid gland

**Inspection**

Swallow, take tongue out

**Palpation**

Size, consistency, surface, tenderness, temperature, overlying skin fixation,

**Percussion**

At sternum to check retro sternal extension

**Neck**

- Lymph nodes - cervical and axillary
- Carotid pulse

**Eye**

- Exophthalmos,
- Lid lag,
- Lid retraction,
- Ophthalmoloplegia,
- Diplopia,
- Chemosis,
- Redness.

**Face** - anxious, restless, staring look

**Hands** - tremors, sweating, warm, Palmer erythema, clubbing

**Pulse** -- irregular, good volume

**Blood pressure**—may be high

**Skin** --pretibial myxedema, vitiligo

**Precordium** -- flow murmur

**Muscle** --Proximal myopathy

**Brisk reflexes**

**Relevant**

Joints (RA)

Rash (SLE)

Dry eyes

Finger prick marks (Diabetes mellitus)

Skin crease pigmentation (Addison's)

Phalen and tinnel signs for carpal tunnel syndrome

Fundoscopy (Diabetes mellitus)

**Hypothyroid**

Slow mentation

Speech- hoarse coarse husky voice

Depressed, puffy face

Loss of eyebrows outer third

Xanthelasmas

**Relevant:**

Look for position vibration sense (vitamin B 12)

Cerebellar ataxia

Joints (RA)

Rash (SLE)

Dry eyes

Finger prick marks ( DM)

Skin crease pigmentation (Addison's)

Phalen and tinnel signs for carpal tunnel syndrome

Fundoscopy (DM)

## 5.7: Examination scheme in anemia

General physical examination

- Pallor
- Koilonychias
- Leukonychia (GI losses)

- Bruises/ petechia (aplastic anemia)
- Pulse tachycardia with good volume
- Periorbital puffiness
- Angular stomatitis
- Atrophic glossitis
- Chronic pharyngitis
- Lymph nodes
- Jugular venous pressure
- Bony tenderness
- Pedal edema

**Precordial examination** - heaving apex, flow murmurs

**Lungs** -- pulmonary edema (high output cardiac failure)

**Abdomen** - spleen, liver, lymph nodes, per rectal examination for hemorrhoids

**Neurological**— vibration and position sense (B12 deficeiency)

**Proximal myopathy** (Vitamin D deficiency)

I would like to ask about dietary habits and menstrual loss in female patient